Progress Report
1984
Resource Harvest by
Local Residents of the
Upper Koyukuk Region

Inventory Conducted July, August 1985

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Fishing

Allakaket/Alatna households fish with setnets up and downriver from the village on the Koyukuk, and on the Alatna and Kanuti Rivers (See Fig. 3). Most setnets are set within 10 river miles of the village on the Koyukuk. Setnets are used particularly to catch salmon (chum and kings), whitefish, sheefish, and more incidentally for grayling, pike and burbot. Five household set nets within the Refuge. Fishing by rod and reel for grayling and sheefish takes place from about 5 miles downriver on the Koyukuk to about 10 miles up the Alatna. Seining for sheefish, whitefish and suckers occurs on the Alatna River, especially just upriver from its junction with Siruk Creek. One household seines below the village on the Koyukuk for whitefish.

Bettles/Evansville has an extended area of fishing (by rod and reel), in comparison to Allakaket/Alatna, due to aircraft access to areas such as the Alatna, Kobuk, Pah and Noatak Rivers, and Walker Lake (see Fig. 4 & 4a). Nearer the village, the John River and Wild Rivers and the stretch of the Koyukuk between, accessed by boat and by foot, are favorite areas for fishing by rod and reel. Five households used setnets along the Koyukuk, mostly within a few miles downriver of Bettles. One household had a setnet within the Refuge at the confluence of the South Fork.

Thirty six of 48 surveyed Allakaket/Alatna households (75%) took part in fishing during 1984. The species of fish pursued by the highest percentage of Allakaket/Alatna bouseholds (66.7%) is the sheefish, taken mostly by setnet, but also by seining and hooking (see Fig. 2 and Table 6). Whitefish were harvested (seined and setneted) by 52.1% of Allakaket households, chum salmon by 33.3% and kings by 27.2%. The greatest harvest was of chum salmon, followed by sheefish and whitefish (see Table 5). The figures for the whitefish harvest are probably artificially low due to one very active household's inability to estimate the number of fish caught.

Ten of 32 surveyed Bettles/Evansville households (56.3%) participated in fishing during 1984. The species taken by the greatest percentage of households was grayling (66.7%), followed by pike (18.8%). Grayling was the species harvested in the greatest numbers, and chum salmon was the species with the second greatest harvest. Bettles/Evansville residents fish for all species, except salmonoids, predominately by rod and reel.

Big Game Hunting

Big game hunting for Allakaket/Alatna households revolves around the river system (see Fig. 6 & 6a). Moose and bear are pursued up and downriver from the village along the Koyukuk and it tributaries. The South Fork of the Koyukuk is a particularily well harvested moose hunting area. Few Allakaket/Alatna households were involved in sheep hunting during 1984, and only one household successfully harvested sheep. The areas utilized for sheep hunting were the John River up to and including the Hunt Fork, and the Alatna River to Kutuk Creek. The few caribou harvested were hunted west of the Alatna drainage by snowmachine access.

Big game hunting by Bettles/Evansville households is not necessarily limited to areas accessible by boat (see Fig. 7 & 7a), but rather is expanded by airplane access. Much of the moose hunting does occur by boat, especially

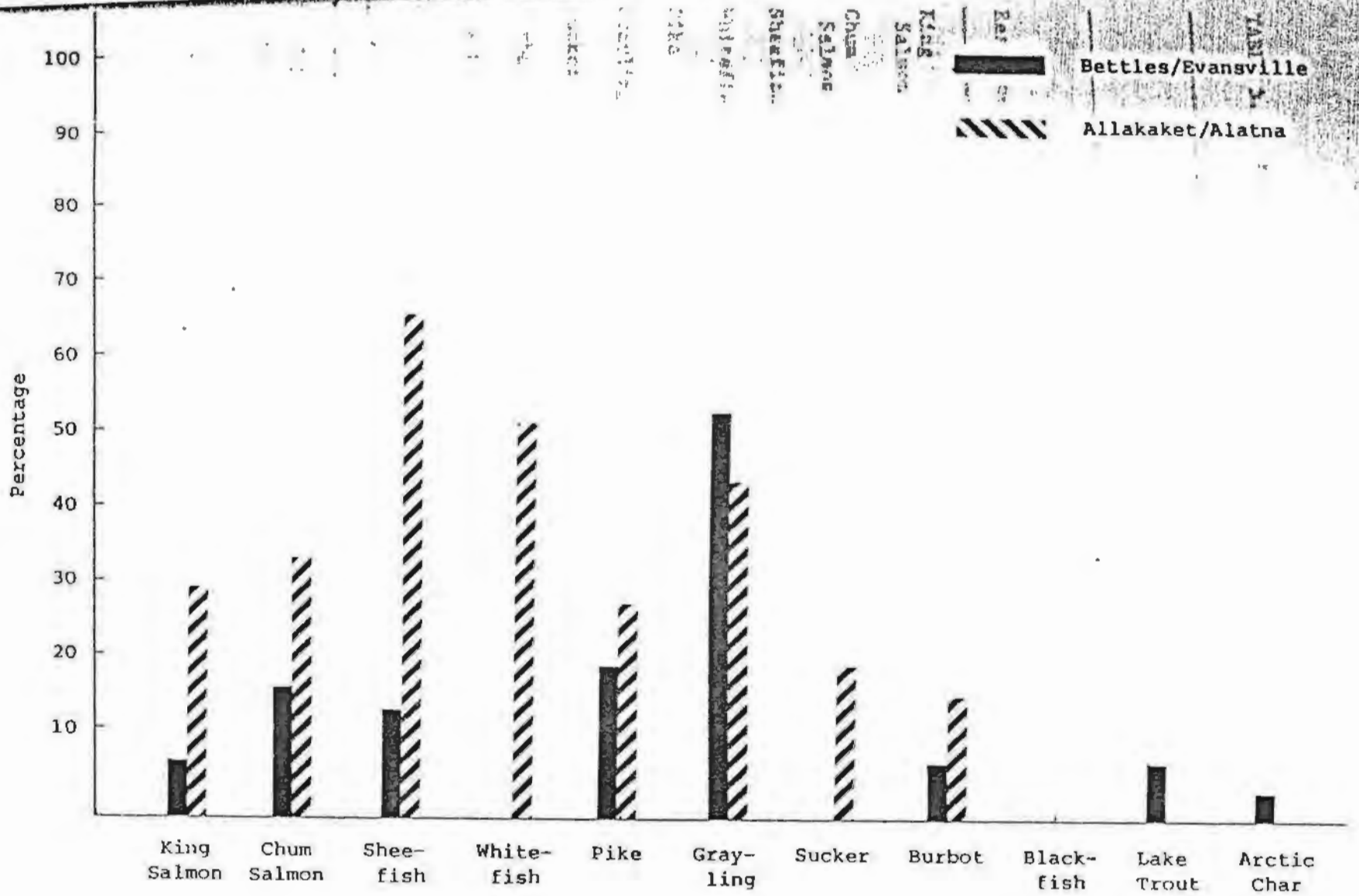

FIGURE 2. FISHING PARTICIPATION - PERCENTAGE OF HOUSEHOLDS HARVESTING FISH IN 1984

TABLE 5. Fishing Harvests, 1984

Resource	Bettles/Evansville N=32				Allakaket/Alatna N=48			
	# of Hslds. Part.	Range Hsld. Hvst.	Mean Hsld. Hvst.	Total Comm. Hvst.	# of Hslds. Part.	Range Hsld. Hvst.	Mean Hsld. Hvst.	Total Comm. Hvst.
King Salmon	2	6-7	0.4	13	14	1-50	5.1	243
Chum Salmon	5	20-40	4.0	128	16	15-2000	177.6	8524
Sheefish	3	1-6	0.4	14	32	2-600	37.2	1786
Whitefish	0	NA	NA	0	25	2-1500	68.4	3282*
Pike	5	1-10	0.8	25	13	2-400	8.7	416
Grayling	16	1-60	11.1	355	21	5-100	17.4	836
Sucker	0	NA	NA	NA	9	2-100	7.9	377
Burbot	2	1-6	0.2	7	7	3-10	0.9	42
Blackfish	0	NA	NA	0	0	NA	NA	0
Arctic Char	1	9	0.3	9	0	NA	NA	0
Lake Trout	2	12	0.8	24	0	NA	NA	0

* Whitefish harvest figures for Allakaket/Alatna are probably low due to one family's inability to estimate number caught.

TABLE 6. Fishing Methods and Efforts, 1984

	Bettles/Evansville								Allakaket/Alatna							
	Icenet		Seine		Rod & Reel		Setnet		Icenet		Seine		Rod & Reel		Setnet	
	# of Fish	Days Fished	# of Fish	Days Fished	# of Fish	Days Fished	# of Fish	Days Fished	# of Fish	Days Fished	# of Fish	Days Fished	# of Fish	Days Fished	# of Fish	Days Fished
Chum Salmon	-	-	-	-	2	3	126	46	-	-	-	-	-	-	8524	930
King Salmon	-	-	-	-	-	-	13	28	-	-	-	-	-	-	243	656
Sheefish	-	-	-	-	14	12	-	-	-	-	150	52	149	148	1487	682
Whitefish	-	-	-	-	-	-	-	-	-	-	1530	52	60	88	1692	773
Pike	-	-	-	-	23	15	2	14	-	-	-	-	6	2	410	501
Grayling	-	-	-	-	355	232	-	-	-	-	-	-	836	307	-	-
Suckers	-	-	-	-	-	-	-	-	-	-	-	-	-	-	377	339
Burbot	-	-	-	-	7	5	-	-	-	-	-	-	2	3	38	358
Blackfish	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lake Trout	-	-	-	-	24	5	-	-	-	-	-	-	-	-	-	-
Arctic Char	-	-	-	-	9	6	-	-	-	-	-	-	-	-	-	-

Information gathered from 32 of 37 households in Bettles/Evansville and 48 of 58 households in Allakaket/Alatna.

increase survey of single households. Alatna household heads increased in age one year from last year, as might be expected in a somewhat stable community (McGee, McIntosh and Strong 1984).

Employment Patterns

The nature of Bettles/Evansville as a state DOT/PF airstrip, FAA FSS, and important starting and ending point for trips into the Brooks Range, molds the types and duration of employment available there. More permanent fulltime employment is available in Bettles/Evansville than in Allakaket/Alatna. Because of the nature of the community and employment in Bettles/Evansville, there is a greater turnover in population as people come and go to work for the FAA, Park Service and various private enterprises. The turnover in population may at least partially explain the drop in average duration of employment from 9 months in 1983 to 8.2 months in 1984.

The percent of household heads employed in Allakaket/Alatna decreased from 86.5% in 1983 to 75% in 1984, while average duration of employment for household heads and the general populace increased slightly (McGee, McIntosh, Strong 1984). The drop in percent of household heads employed may relate to the split up of households with new house construction. More young people are now household heads, yet are not employed. Quite a bit of construction took place in the village during the summer of 1984, perhaps explaining the increase in duration of employment - even though there was little available fire fighting work with BLM.

Fishing

Fishing is an important activity in both Bettles/Evansville (56.3% of households surveyed participating) and Allakaket/Alatna (75% of surveyed households). The percent involved in fishing decreased in Bettles/Evansville and increased in Allakaket/Alatna since 1983. The areas used for fishing by both villages have remained somewhat stable through all 3 years of the survey (McGee, McIntosh, Strong 1984; Marcotte and Haynes 1985). Some variation is to be expected because of different households being included in the questioning from year to year. The fishing area for Bettles/Evansville seems to have decreased in 1984. Little fishing activity took place below Old Bettles on the Koyukuk in 1984. Fewer areas were accessed by airplane due to at least two families with airplanes moving out of Bettles/Evansville and what was described as a "busy" summer for residents. A number of respondents mentioned that they would have liked to do more fishing that summer, but just didn't have the time.

Bettles/Evansville fishing harvest decreased quite drastically in all species except king salmon and burbot in 1984 from 1983, reflecting the decreased participation and time devoted to fishing (see Table 16). Allakaket/Alatna harvest of king salmon, chum, whitefish and suckers dropped in 1984 from 1983, while harvest of sheefish, pike, grayling and burbot increased. Comparing the figures in Table 16, the harvest of salmon and whitefish among surveyed households hit a noticeable low in 1984. Whitefish harvest figures may be artificially low, as described elsewhere in the text. Actual efforts (days spent fishing) for whitefish harvest exceeded that for 1983 (see Table 6 and

TABLE 16. 1973, 1982, 1983, 1984 Fishing Harvests

	Bettles/Evansville N=32								Allakaket/Alatna N=48							
	1973*		1982**		1983****		1984		1973*		1982**		1983****		1984	
Resource	Total Comm. Hvst.	Mean Hsld. Hvst.	Total Comm. Hvst.	Mean Hsld. Hvst.	Total Comm. Hvst.	Mean Hsld. Hvst.	Total Comm. Hvst.	Mean Hsld. Hvst.	Total Comm. Hvst.	Mean Hsld. Hvst.	Total Comm. Hvst.	Mean Hsld. Hvst.	Total Comm. Hvst.	Mean Hsld. Hvst.	Total Comm. Hvst.	Mean Hsld. Hvst.
King Salmon	0	(a)	9	0.5	0	NA	13	0.4	300	(a)	322	9.2	396	8.8	243	5.1
Chum Salmon	0	(a)	532	26.6	426	20.3	128	4.0	12600	(a)	11497	328.5	10765	239.2	8524	177.6
Sheefish	0	(a)	212	10.6	23	1.1	14	0.4	1600	(a)	2451	70.0	1540	34.2	1786	37.2
Whitefish	50	(a)	210	10.5	0	NA	0	NA	24000	(a)	4858	138.8	11610	258.0	3282	68.4
Pike	50	(a)	10	0.7	115	5.5	25	0.8	500	(a)	401	11.5	248	5.5	416	8.7
Grayling	200	(a)	491	24.6	807	38.4	355	11.1	1000	(a)	1639	46.8	631	14.0	836	17.4
Suckers	100	(a)	0	NA	0	NA	0	NA	400	(a)	480	13.7	780	17.3	377	7.9
Burbot	(a)	(a)	0	NA	0	NA	7	0.2	(a)	(a)	58	1.7	0	NA	42	0.9
Blackfish	(a)	(a)	0	NA	0	NA	0	NA	(a)	(a)	(a)	(a)	0	NA	0	NA
Arctic Char	(a)	(a)	61***	3.1***	145	6.9	9	0.3	(a)	(a)	0***	NA***	0	NA	0	NA
Lake Trout	0	(a)			254	12.1	24	0.8	(a)	(a)			0	NA	0	NA

* Nelson, Mautner and Bane 1982.
** Marcotte and Haynes 1985.
*** Lake trout and arctic char harvest figures combined for 1982.
**** McGee, McIntosh and Strong 1984.
(a) Data not available.

cGee, McIntosh and Strong 1984). The days spent attempting to harvest salmon were down from 1983, almost 100 days less for both chum and kings. It is, therefore, difficult to pinpoint whether the decrease in harvest is due to a lessening of effort or lower populations of fish. Whether or not setnetting was a less important activity in Allakaket/Alatna during 1984, rod and reel fishing increased noticeably - 547 grayling were in harvested 83 days of "hooking" during 1983, while 836 grayling were harvested in 307 days of rod and reel fishing during 1984. It must he noted that "days fished" contains a high probability of error in all types of fishing. A net may be put out for two months to purposefully catch salmonoids, and also catch grayling or pike. The interviewee may respond that he fished for grayling or pike two months.

Big Game

The general big game hunting areas for Allakaket/Alatna and Bettles/Evansville have remained fairly consistent the three years surveyed. Allakaket/Alatna hunters make far greater use of Kanuti NWR for their hunting and actual harvesting of moose and bear. The Kanuti and South Fork of the Koyukuk River are particularly used by Allakaket/Alatna hunters, while the North and Middle Forks of the Koyukuk and the John River continue to be well-used by Bettles/Evansville household hunters.

Allakaket/Alatna harvest of moose and black bear increased in 1984 (see Table 17). Both the total community harvest and the mean household harvest ncreased noticeably. On the other hand, while the Bettles/Evansville total community harvest of moose and black bear remained about the same as 1983, the mean household harvest dropped considerably. The drop in harvest, particularly moose, may relate to the aforementioned "busyness" of Bettles/Evansville households during the summer of 1984. Also, many of the new households interviewed for 1984 consisted of single adults not usually involved in the harvest of resources, i.e., teachers and FAA flight service specialists.

Sheep were harvested in small numbers (one by Bettles/Evansville and two by Allakaket/Alatna) during 1984. No sheep were harvested by surveyed households in either village during 1983. A few caribou were harvested by traveling long distances from the villages by snow machines or aircraft. Caribou and sheep are prized game as evidenced by the distances traveled and difficulties involved in hunting.

Waterfowl and Other Birds

The Refuge remains an important waterfowl hunting area for Allakaket/Alatna households. The survey results shows over 2/3 of geese and ducks harvested to have come from within the Refuge, in particular, from the Kanuti and South Fork Rivers. This is a great increase from 1983 results which showed approximately 1/4 of waterfowl to be taken within the Refuge (McGee, McIntosh nd Strong 1984). The results for 1984 may he falsely high due to ambiguous nswers given by respondents. The lower Alatna River, north of the Refuge, is another well used hunting area from year to year, especially for Alatna households. Few Bettles households (3) harvested waterfowl and only one harvested waterfowl on the Refuge. As in 1983, ducks from the Refuge were harvested on the Koyukuk below Old Bettles to the confluence of the South